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Cover Photo of Monroe Water Treatment Staff—2007

utilities department

Mayor Mark Kruzan

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The City of Bloomington's Utilities Service Board (USB) meets every other Monday at 5:00 pm. USB meetings are public meetings and citizens are welcome to attend, observe and record what transpires. For more information, contact the Director's Office at 600 East Miller Drive Bloomington Indiana 47404 812.349.3650

2007 Water Quality Report

The Monroe Water Treatment Plant Turns 40!

The Monroe Water Treatment Plant has supplied Monroe County with high quality drinking water for 40 years. Since the plant opened in 1967 it has operated 24 hours a day, seven days a week. The plant is staffed by 12 full-time and two part-time employees with an average of 16 years worth of experience. The staff has a combined 230 years of service in our community!

Water Treatment Plant Operators are certified by the State of Indiana's Department of Environmental Management and must pass a state exam to receive the certification. The state offers five levels of licensing and certification. Indiana state law requires every Public Water System to employ at least one certified Drinking Water Operator. All of the full-time operators employed at the Monroe Water Treatment Plant are certified by the state. More than 90% of our operators maintain a Level 5 water certification, the highest level available.

Our drinking water operators are responsible for treating, testing and pumping water to more than 100,000 customers throughout Monroe County. They control equipment and processes that remove or destroy impurities found in the raw lake water. They use chemical-feeding devices, take samples of the water and perform chemical and biological laboratory analyses. Operators make adjustments to the amount of chemicals, such as chlorine, to ensure the water meets or exceeds all federal and state drinking water standards. In addition to hourly water quality testing, operators monitor water levels in the City's seven storage tanks to supply sufficient water for 24-hour fire protection.

The mechanical staff at Monroe Water Treatment Plant maintains and repairs the machines, pumps and equipment used in the treatment and delivery of safe drinking water. The full-time maintenance crew utilizes an aggressive, preventative maintenance program to assure dependable and uninterrupted water service to our customers.

The City of Bloomington Utilities Department thanks the entire staff at Monroe Water Treatment Plant for providing us with a high quality and reliable source of tap water for 40 years!

In order to ensure that tap water is safe to drink, USEPA and the Indiana Department of Environmental Management prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. This publication describes those guidelines for the City of Bloomington drinking water. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and their potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These individuals should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Your Drinking Water Source: The source of the City of Bloomington's drinking water is surface water from Monroe Reservoir, located nine miles southeast of Bloomington. The City of Bloomington has received a copy of the Indiana-Monroe Reservoir Source Water Assessment. Federal guidelines require the State of Indiana to issue Source Water Assessments in order to identify significant or possible sources of contamination. Information concerning Monroe Reservoir's Source Water Assessment available by contacting the City of Bloomington's Water Quality Office.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

*DEFINITIONS:

90th Percentile - Ninety percent of samples had lower values than the value indicated.

Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

CFU/ml - Colony forming units per milliliter.

Colony Forming Unit - An area of visually distinct bacterial growth, which may result from a single bacterium or pairs, clusters or chains of bacteria.

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

ppm - parts per million. Equivalent to milligrams per liter (mg/l).

ppb - parts per billion. Equivalent to micrograms per liter (ug/l).

Total Organic Carbon (TOC) - a measurement of natural and manmade organic material in the water. TOC reacts with disinfectants to form disinfection by-products.

Treatment Technique (TT)- A required process intended to reduce the level of a contaminant in drinking water.

Detected Contaminants Table

Substance	Highest Level Allowed (EPA's MCL*)	Highest Level Detected	Ideal Goals (EPA's MCLG's*)	Sources of Contamination
Microbiological Contaminants				
Heterotrophic Plate Count	500 CFU/ml*	40 CFU/ml	None	Natural lake bacteria, wildlife, septic systems
Turbidity	Treatment Technique*	0.14 turbidity units[1]	None	Soil runoff
Inorganic Contaminants				
Barium	2 ppm*	0.015 ppm	2 ppm	Erosion of natural deposits
Copper[2]	1.3 ppm (Action Level)*	0.018 ppm (90th Percentile)*	1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits
Chloramines (as Cl_2)	4.0 ppm (MRDL)*	2.8 ppm	4 ppm (MRDLG)*	Water additive to control microbes
Fluoride	4 ppm	0.99 ppm[3] average	4 ppm	Water additive that promotes strong teeth
Nitrate	10 ppm	0.30 ppm	10 ppm	Runoff from fertilizer use; leachate from septic systems, sewage; erosion of natural deposits
Lead[2]	15 ppb* (Action Level)	5.2 ppb (90th Percentile)	0	Corrosion of household plumbing systems; erosion of natural deposits
Organic Contaminants				
Total Trihalomethanes (TTHM)	80 ppb	54.0 ppb average[4]	0	Byproduct of drinking water chlorination
Haloacetic Acids (HAA5)	60 ppb	45.0 ppb average[5]	0	Byproduct of drinking water disinfection
Total Organic Carbon (TOC)	minimum 35% removal	46% removal average[6]	None	Naturally present in the environment

LISTED ABOVE are 11 contaminants detected in Bloomington's drinking water during 2006. All are within allowable levels. Not listed are the more than 75 primary contaminants for which we tested that were not detected.

ADDITIONAL INFORMATION:

1 Turbidity levels ranged from 0.05 to 0.29 with an average of 0.14 turbidity units. The lowest level of compliance on a monthly basis was 100%.

2 Data listed are from 2004 and are the most recent testing done in accordance with regulations. None of the samples tested exceeded the action level for copper or lead. The next sampling period is in 2007.

3 Fluoride levels ranged from 0.10 to 1.24 with an average of 0.99 ppm.

4 Total trihalomethane levels ranged from 33.4 to 86.3 ppb. Some people who drink water containing trihalomethanes in excess of the MCL over many years could experience problems with their liver, kidneys or central nervous systems, and may have increased risk of getting cancer.

5 Haloacetic acids (HAA5) levels ranged from 8.5 to 69.6 ppb. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

6 Total Organic Carbon (TOC) removal percentages ranged from 35% to 60% with an average of 46%.

Este informe contiene información muy importante sobre el agua potable. Tradúzcalo o pídale a alguien que se lo explique.

이 서류는 식수에 관한 중요한 정보를 담고 있으니, 필요하면 다른이에게 번역이나 낭독을